

REMARKS

The Office Action dated February 6, 2007, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1 and 4-21 are currently pending in the application, of which claims 1 and 11 are independent claims. Claims 1, 6-12, and 18-21 have been amended to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 2-3 have been cancelled without prejudice or disclaimer. Claims 1 and 4-21 are respectfully submitted for consideration.

Claims 1-12 and 14-21 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent Application Publication No. 2001/0021909 of Shimomura et al. ("Shimomura"). Claims 2-3 have been cancelled without prejudice or disclaimer, and their rejection is, therefore, moot. Claims 1, 4-12, and 14-21 recite subject matter that is neither disclosed nor suggested in Shimomura.

Claim 1, upon which claims 4-10 depend, is directed to a receptionist robot system. The system includes a traveling robot including autonomous traveling means for traveling autonomously and recognition means for recognizing a guest at least according to image information. The system also includes management database means adapted to communicate with the robot and provided with a database containing identification information to identify the guest recognized by the recognition means. The guest is

identified at least according to information obtained by the recognition means and management database. The traveling robot further includes dialog means for communicating with the guest recognized by the recognition means and response means for determining the contents of communication with the guest according to an identity of the guest recognized by the recognition means and associated information from the management database means.

Claim 11, upon which claims 12-21 depend, is directed to a receptionist robot system. The system includes a traveling robot adapted to travel autonomously. The system also includes management database means adapted to communicate with the robot and provided with a database adapted to retain and update individual personal information and schedule information for identifying a guest. The traveling robot comprises recognition means for recognizing the guest at least according to image information and response means for determining an action to conduct the guest recognized by the recognition means. The management database means is communicably connected with input means for inputting the schedule information and notification means for notifying the arrival of the guest to a host according to the action of the response means with respect to the guest. The traveling robot further includes response means for determining the contents of communication with the guest according to an identity of the guest recognized by the recognition means and associated information from the management database means.

Certain embodiments of the present invention provide a robot that is capable of identifying a guest and taking actions appropriate to the identified guest. For this purpose, the robot can be provided with a recognition means and management database means. In short and for example, the robot can recognize the guest from the guest's face, and can act according to an appointment set up for this particular person. Humans are known to be pleased or otherwise excited when they are recognized by a stranger. Certain embodiments of the present invention advantageously allow a robot to recognize a guest and take an appropriate action. This can provide a highly pleasing impact on the guest in addition to accomplishing a designated task, such as, for example, conducting the guest to a designated room.

Applicants respectfully submit that Shimomura fails to disclose or suggest all of the elements of any of the presently pending claims, and, thus, cannot provide the critical and unobvious advantages discussed above.

Shimomura generally relates to a conversation processing apparatus and method and recording medium thereof. As explained at paragraphs [0001] to [0008], the object of Shimomura is to create a robot (such as a teddy bear, doll, or – as illustrated in Figure 1 – a robotic dog) that is able to carry out a natural conversation with a user, including naturally changing the topic to avoid user boredom.

More specifically, the robot disclosed in Shimomura is an amusement robot that is not designed to achieve any specific task. This robot is designed to choose topics from memory by using an association table so as not to be boring by repeating a same topic

and not to be unnatural by changing topics too frequently. This may provide a chat-like conversation, but does not achieve any definite task such as receiving a guest or conducting the guest to a designated place.

Indeed, the robot of Shimomura is only provided with a highly rudimentary recognition means which is capable of identifying simple objects as a ball and a wall as described at paragraph [0068]. All it performs, essentially, is random action that is associated with surrounding objects in a somewhat unpredictable manner. Similarly, the shift in conversation topics does not provide any definite function but only creates a pleasing effect to the user. Thus, Shimomura cannot provide the critical and unobvious advantages discussed above.

Claims 1 and 11 each recite “A receptionist robot system.” Shimomura fails to disclose or suggest at least this feature of the claims. Shimomura’s robot is not a receptionist robot system: it is a toy that simulates conversation for the amusement of the user. Thus, Shimomura fails to disclose a robot that is “a receptionist robot system,” and, therefore, fails to anticipate claims 1 and 11. Accordingly, it is respectfully requested that this rejection be withdrawn.

Claims 1 and 11 also recite a traveling capability (“a traveling robot including autonomous traveling means for traveling autonomously” – claim 1 and “a traveling robot adapted to travel autonomously” – claim 11). Shimomura fails to disclose or suggest at least these features of the claims. Visual inspection of the “thigh” joints of the robotic dog in Figure 1 strongly suggests that Shimomura’s robotic dog is not equipped to

travel. Additionally, there is no apparent guidance system in Shimomura that would permit Shimomura's robotic dog to travel.

Furthermore, although paragraph [0066] of Shimomura mentions "walk" and "chase the ball" as possible commands to the robotic dog and paragraph [0060] states that the robotic dog can "walk," it appears based on paragraphs [0070] and [0071] that Shimomura's response is a change of posture, not autonomous travel. Indeed, the control of the actuators is governed by a "posture shifting unit" 34, which suggests that Shimomura's robotic dog is designed to pose (including active poses like wagging a tail), not travel. Accordingly, Shimomura fails to disclose the traveling capability features recited in claims 1 and 11. Thus, it is respectfully requested that the rejection be withdrawn for this additional reason.

Claims 1 and 11 also recite features relating to recognition and identification of guests ("external recognition means for recognizing a guest" and "a database containing identification information to identify the guest" – claim 1 and "a database adapted to retain and update individual personal information and schedule information for identifying a guest" and "external recognition means for recognizing the guest at least according to image information" – claim 11). Shimomura also fails to disclose or suggest at least these features.

Shimomura's robotic dog does include an image recognition unit 31B and a speech recognition unit 31A. Shimomura, however, contains no mentions of guests, and

makes no application of image or speech recognition to the recognition or identification of guests.

Shimura, in fact, does not recognize or identify people generally. Shimura's robotic dog has a (singular throughout Shimura's disclosure) user (although paragraph [0167] makes a general statement about "users" there is no suggestion that any robotic dog of Shimura can have more than one user). Unsurprisingly, therefore, Shimura's robotic dog does not even perform recognition and identification of its own user, much less of "a guest" as recited in claims 1 and 11. In consequence, for this further reason, it is respectfully requested that this rejection be withdrawn.

Claim 13 was rejected under 35 U.S.C. 103(a) as being unpatentable over Shimomura in view of U.S. Patent No. 6,584,375 of Bancroft et al. ("Bancroft"). The Office Action recognized that Shimomura does not disclose or suggest "wherein the management database comprises map information including at least a position of a stairway and the traveling robot is capable of traveling inside a building including a stairway according to the map information." The Office Action supplied Bancroft in an effort to remedy these deficiencies of Shimomura. Applicants respectfully traverse this rejection.

Claim 13 depends from and further limits claim 11. Bancroft does not fully address the above-identified deficiencies of Shimomura with regard to claim 11, and, thus, the combination of Shimomura and Bancroft cannot disclose or suggest all of the

elements of any of the claims that depend from claim 11. Furthermore, Bancroft does not remedy the specific deficiency of Shimomura identified by the Office Action.

Bancroft generally relates to a system for a retail environment. The Office Action relied on column 1, lines 36-40, of Bancroft which notes that a “customer may well exit that particular retail environment looking for a store that might better fulfill their needs.” At column 6, lines 45-67, which were also cited by the Office Action, Bancroft describes that Bancroft’s robot can be equipped with a motion subsystem portion 400, which can be capable of traveling from a current position to a goal position of a retail environment. Bancroft does mention the use of maps by the robot, but describes only two-dimensional guidance (“global position [sic] system (GPS) data, pre-stored maps data, and x-y position system, i.e., grid data, for example.”). In any event, Bancroft is completely silent with regard to the “stairway” feature of claim 13. Accordingly, Bancroft cannot fully remedy the deficiencies of Shimomura, and the combination of Shimomura and Bancroft cannot disclose or suggest all of the elements of claim 13.

Additionally, the robot of the Bancroft invention may be capable of traveling in a certain way, but it interfaces with a user or customer only by allowing the user to enter input (via a touch panel, a remote computer, or a voice recognition system) and generating output to the user according to data stored in the memory portion. It is, therefore, no more than a computer terminal dedicated to the provision of retail information to customers. It is not equipped to recognize a customer from his or her face or physically guide or conduct a customer. Accordingly, the combination of Bancroft

and Shimura cannot provide the above-identified critical and unobvious advantages of certain embodiments of the present invention.

Furthermore, the combination of Bancroft and Shimomura is not properly motivated. Even taking for granted that Bancroft teaches that Bancroft's invention better fulfills the customer's needs, Bancroft is not comparing Bancroft's robotic implementation with previous robotic implementations, but with relying solely on human customer representatives.

Accordingly, Bancroft is suggesting using Bancroft's robot not as an enhancement to previous robots, but instead to augment the human workforce of a retail environment. It should, therefore, be evident that such a suggestion is not a suggestion to combine Bancroft and Shimomura, but simply to install one of Bancroft's robots in a retail environment.

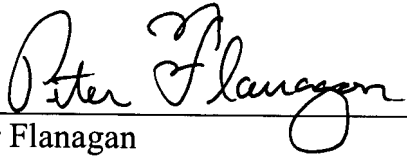
Additionally, there is no indication that Shimomura's robotic dog would serve in a retail environment. Indeed, Shimomura's robotic dog appears to be designed as a personal companion robot (hence the canine appearance of Shimomura's robot). Accordingly, one of ordinary skill in the art would not find teaching, motivation, or suggestion to combine the features of a retail customer service robot of Bancroft and the features of a personal companion robot of Shimomura to arrive at the combination proposed in hindsight by the Office Action. Thus, it is respectfully requested that the rejection of claim 13 be withdrawn.

For the Examiner's convenience, it is noted that the term "external" before "recognition means," has been removed to make clear that the recognitions means are comprised in the traveling robot, not external to the traveling robot.

For the reasons explained above, it is respectfully submitted that each of claims 1 and 4-21 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1 and 4-21 be allowed, and that this application be passed to issuance.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,


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